AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-5. (Canceled)

6. (Currently Amended) The system of claim [[5]] 8, further comprising:

a first and second analog front end circuit electrically connected to the respective first and second pair of lines in the multiline communication system and the respective first and second transceivers.

7. (Currently Amended) The system of claim [[5]] 8, wherein the first and second pair of lines comprise:

a twisted pair of copper lines.

8. (Currently Amended) A multiline communication system for reducing signal distortion, the system comprising: ~~The system of claim 5,~~

a first and second pair of lines in the multiline communication system;

a first and second transceiver electrically connected to the corresponding first and second pair of lines;

a split-pair receiver electrically connected to a line of the first pair of lines and a line of the second pair of lines and configured to identify crosstalk on the first and second transceivers;

a frequency equalizer; and

a post-processing unit configured to perform MIMO post-processing on signal vectors received at each transceiver of the pair or transceivers and the split-pair receiver,

wherein the split-pair receiver receives a signal including the crosstalk from the first and second transceivers and provides a corresponding signal vector to the post-processing unit, and

wherein the post processing unit is further configured to minimize crosstalk on the first and second pair of lines in the multiline communication system with the frequency equalizer, and

wherein the line of the first pair of lines is a transmitting line and the line of the second pair of lines is a receiving line.

9. (Currently Amended) A multiline communication system for reducing signal distortion, the system comprising: ~~The system of claim 5,~~

a first and second pair of lines in the multiline communication system;

a first and second transceiver electrically connected to the corresponding first and second pair of lines;

a split-pair receiver electrically connected to a line of the first pair of lines and a line of the second pair of lines and configured to identify crosstalk on the first and second transceivers;

a frequency equalizer; and

a post-processing unit configured to perform MIMO post-processing on signal vectors received at each transceiver of the pair or transceivers and the split-pair receiver,

wherein the split-pair receiver receives a signal including the crosstalk from the first and second transceivers and provides a corresponding signal vector to the post-processing unit, and

wherein the post processing unit is further configured to minimize crosstalk on the first and second pair of lines in the multiline communication system with the frequency equalizer, and

wherein the line of the first pair of lines is a transmitting line and the line of the second pair of lines is a transmitting line.

10. (Currently Amended) A multiline communication system for reducing signal distortion, the system comprising: ~~The system of claim 5, wherein the split-pair receiver is a first split-pair receiver, the system further comprising~~

a first and second pair of lines in the multiline communication system;

a first and second transceiver electrically connected to the corresponding first and second pair of lines;

a first split-pair receiver electrically connected to a transmitting line of the first pair of lines and a receiving line of the second pair of lines and configured to identify crosstalk on the first and second transceivers;

a second split-pair receiver electrically connected to a receiving line of the first pair of lines and a transmitting line of the second pair of lines;

a frequency equalizer; and

a post-processing unit configured to perform MIMO post-processing on signal vectors received at each transceiver of the pair or transceivers and the split-pair receiver,

wherein the split-pair receiver receives a signal including the crosstalk from the first and second transceivers and provides a corresponding signal vector to the post-processing unit, and

wherein the post processing unit is further configured to minimize crosstalk on the first and second pair of lines in the multiline communication system with the frequency equalizer; ~~and~~

~~wherein the first split-pair receiver is electrically connected to a transmitting line of the first pair of lines and a receiving line of the second pair of lines.~~

11. (New) The system of claim 9, further comprising:

a first and second analog front end circuit electrically connected to the respective first and second pair of lines in the multiline communication system and the respective first and second transceivers.

12. (New) The system of claim 9, wherein the first and second pair of lines comprise:

a twisted pair of copper lines.

13. (New) The system of claim 10, further comprising:

a first and second analog front end circuit electrically connected to the respective first and second pair of lines in the multiline communication system and the respective first and second transceivers.

14. (New) The system of claim 10, wherein the first and second pair of lines comprise:

a twisted pair of copper lines.